

# African-European Early-Career Network for Mathematical Analysis and Related Fields



Meeting 12.06.26 17:00-19:00 CET

## *Program*

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Math Talk | 30 *min*

### **On Hypoellipticity of Hörmander Operators**

By Jona Stahlschmidt, Leipzig University & MIS MPG, Germany

Abstract: A differential operator is called *hypoelliptic* if the smoothness of the right-hand side of the associated differential equation immediately implies the smoothness of its solutions. While this qualitative definition generalizes elliptic differential operators, it provides little direct insight into the actual structure of the operator itself. In this talk, I will present a classical result that identifies a broad class of second-order linear differential operators - the so-called *Hörmander operators* - as hypoelliptic. I will also discuss some more recent developments related to this theory.